

WHAT IS CLAIMED IS:

1. An electromagnetic wave measuring apparatus for measuring an electromagnetic wave radiated from an antenna to be measured, comprising:

a holder operable to hold said antenna to be measured;
and

a plurality of probe antennas operable to detect said electromagnetic wave radiated from said antenna to be measured.

2. An electromagnetic wave measuring apparatus according to claim 1, wherein each of said plurality of probe antennas has a shielded loop probe for measuring a magnetic field in said electromagnetic wave.

3. An electromagnetic wave measuring apparatus as claimed in claim 1, wherein said plurality of probe antennas are arranged on a circular arc having a center substantially at said holder.

4. An electromagnetic wave measuring apparatus as claimed in claim 1, wherein said plurality of probe antennas are arranged on a circle having a center substantially at said holder with constant intervals.

5. An electromagnetic wave measuring apparatus as claimed in claim 4, further comprising:

an installing unit operable to hold said plurality of probe antennas arranged on said circle; and

a first rotating unit operable to rotate said installing unit around a straight line containing a diameter of said circle as a rotation axis.

6. An electromagnetic wave measuring apparatus as claimed in claim 4, further comprising a second rotating unit operable to rotate said holder around a straight line containing a diameter of said circle as a rotation axis.

7. An electromagnetic wave measuring apparatus as claimed in claim 5 or 6, further comprising:

a measuring unit operable to measure a distribution of an electromagnetic field generated by said electromagnetic wave radiated from said antenna to be measured based on said electromagnetic wave detected by said plurality of probe antennas; and

a switching unit operable to switch which one of detection signals indicative of said electromagnetic wave detected by said plurality of probe antennas, respectively, is to be input to said measuring unit.

8. An electromagnetic wave measuring apparatus as claimed in claim 7, further comprising:

a cable group containing a plurality of cables operable to electrically connect each of said plurality of probe antennas to said measuring unit and to input each of said detection signals to said measuring unit; and

an electromagnetic wave absorber, provided in surroundings of said cable group, operable to absorb said electromagnetic wave radiated from said antenna to be measured.

9. An electromagnetic wave measuring apparatus as claimed in claim 7, wherein said plurality of probe antennas contains vertically-polarized wave antennas each of which detects a

vertically polarized component of said electromagnetic wave and horizontally-polarized wave antennas each of which detects a horizontally polarized component of said electromagnetic wave.

10. An electromagnetic wave measuring apparatus as claimed in claim 9, wherein said vertically-polarized wave antennas and said horizontally-polarized wave antennas are arranged to be opposed to each other with said rotation axis sandwiched therebetween.

11. An electromagnetic wave measuring apparatus as claimed in claim 7, further comprising a fixed antenna, provided on a position away from said antenna to be measured by a predetermined distance, operable to detect said electromagnetic wave radiated from said antenna to be measured.

12. An electromagnetic wave measuring apparatus as claimed in claim 11, wherein said measuring unit further measures a phase difference between an electromagnetic wave detected by a first one of said plurality of probe antennas and said electromagnetic wave detected by said fixed antenna.

13. An electromagnetic wave measuring apparatus as claimed in claim 12, wherein said measuring unit further measures a phase difference between an electromagnetic wave detected by a second said plurality of probe antennas and said electromagnetic wave detected by said fixed antenna to further measure a phase difference between said electromagnetic waves detected by said first and second probe antennas.

14. An electromagnetic wave measuring apparatus as claimed in claim 4, further comprising a first rotating unit operable to rotate said plurality of probe antennas around said holder as a center of rotation.

15. An electromagnetic wave measuring apparatus as claimed in claim 7, wherein said installing unit includes a converting unit operable to convert each of said detection signals into a converted signal having a frequency different from said electromagnetic wave and to supply said converted signal to said measuring unit.

16. An electromagnetic wave measuring apparatus as claimed in claim 15, wherein said installing unit includes an electricity accumulating unit operable to supply electricity to said converting unit.

17. An electromagnetic wave measuring apparatus as claimed in claim 16, wherein said installing unit includes:

a plurality of converting units provided for said plurality of probe antennas, respectively; and

a plurality of electricity accumulating units provided for said plurality of converting units, respectively, each of said electricity accumulating units supplying said electricity to a corresponding one of said plurality of converting units.

18. An electromagnetic wave measuring apparatus as claimed in claim 15, wherein said converting unit outputs an optical signal as said converted signal and supplies said optical signal to said measuring unit via an optical fiber.

19. An electromagnetic wave measuring apparatus as claimed in claim 15, wherein said converting unit supplies said converted signal to said measuring unit by wireless communication.